

REMARKS

Claims 2-4 and 6-9 are pending in this application.

The preambles of each of the presently independent claims 2, 7, 8 and 9 have been amended to introduce the additional feature that the fabricating method is the liquid crystal falling drop method. This precludes conventional liquid crystal injection methods where, for example, the sealed portion has an injection hole for restoring an appropriate cell gap at the liquid crystal injecting step. Independent claims 2, 7, 8, and 9 now are all directed to a method for fabricating a liquid crystal display panel by the liquid crystal falling drop method, and require, in part:

1. forming a deformable seal member on a transparent substrate;
2. arranging first spacers on the display area, said first spacers have an initial size in the cell gap direction larger than the gap desired for the liquid crystal display having an initial average size to the desired cell gap of 102.9% to 107.0%;
3. dropping a volume of liquid crystal into the area surrounded by the seal member;
4. forming a panel by sticking a second transparent substrate on the first in a vacuum chamber;
5. placing the panel under atmospheric pressure to deform the spacers; and
6. hardening the seal member after the inner volume of the panel equals the volume of the liquid crystal.

The rejection of claims 2, 4, and 6-9 under 35 USC §103(a) as being unpatentable over Applicant's Prior Art (AAPA) in view of Takanashi et al. (US Patent No. 5,231,527) is in error.

Neither AAPA nor Takanashi et al. teach the claimed invention. As argued in previous amendments which are incorporated by reference, the AAPA does not teach several of the features of the claims mentioned above. Takanashi et al. does not provide the missing teachings of AAPA.

Takanashi et al. merely teaches “a range of dimensional tolerance.” The size range of spacer in Applicant’s invention means a range of elastically deformation. The lower limit of “the standard deviation of the particle diameter” in Takanashi et al. corresponds to “appropriate cell gap” in the invention. However, Takanashi et al. does not teach or suggest that the spacer must have an initial size larger than the predetermined desired value (e.g., an appropriate cell gap), as required by Applicant’s claims. Accordingly, Takanashi et al.’s spacer is not a first spacer with an initial size in a cell gap direction larger than an appropriate cell gap, as required by claims 2, 7, 8 and 9.

Takanashi et al.’s spacer is hardly deformable. The spacer is quite different from that of Applicant’s claimed invention, i.e., the first spacer deforming elastically from an initial size thereof to a predetermined desired size (e.g., a size corresponding to appropriate cell gap). Takanashi et al. states “the present inventors have found that the use of a hardly deformable spacer is effective in solving the problem of the cell gap deviation particularly in the case of a thin substrate, which has led to the completion of the present invention” (col. 2, lines 41-46). Accordingly, Takanashi et al.’s spacer is not elastically deformed from an initial size to the size of the appropriate cell 85.

As mentioned above, the spacer used by Takanashi et al. is quite different from that required by Applicant’s claimed invention. Accordingly, it would not have been obvious to one having ordinary skill in the art at the time the invention was made to modify AAPA with

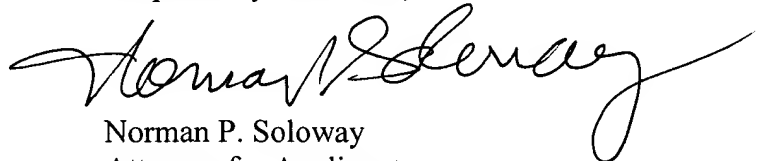
the teaching of Takanashi et al. Moreover, no combination of AAPA and Takanashi et al. could achieve claims 2 or 7-9 in any event. Thus, the rejection of independent claims 2 and 7-9 and also dependent claim 4 as obvious from AAPA in view of Takanashi et al. is in error.

The rejection of claim 3 under 35 USC §103(a) as being unpatentable over AAPA in view of Takanashi et al and in further view of Hiraichi et al. also is in error. Claim 3 depends directly on claim 2. The deficiencies of AAPA and Takanashi et al. vis-à-vis claim 2 are discussed above. Hiraichi et al. does not provide the missing teachings of AAPA and Takanashi et al. Thus, claim 3 is not achieved nor rendered obvious by the combination of AAPA, Takanashi et al and Hiraichi et al.

Having dealt with all the objections raised by the Examiner, the application is believed to be order for allowance. Early and favorable action is respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



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